

Pleas add new claims 21-24:

21. (New) A patient support apparatus comprising:
- a base frame;
  - a patient support coupled to the base frame;
  - a plurality of casters each having a sleeve; and
  - a plurality of caster mounting tubes, each mounting tube having an interior configured to receive the sleeve of a caster, a plurality of external side walls including a generally planar first external side wall abutting the base frame, the mounting tube being connected to the base frame by welds located adjacent the first external side wall, wherein the first external side wall abutting the base frame is formed to include a hole, the base frame is formed to include a hole, the hole in the base frame being aligned with the hole in the first external side wall, and both holes are located between the welds located adjacent the first external side wall.
22. (New) The apparatus of claim 21, wherein each of the plurality of caster mounting tubes has a rectangular outer cross-sectional shape defined by four external side walls.
23. (New) The apparatus of claim 21, wherein the sleeve of each caster has a cylindrical shape and the plurality of caster mounting tubes each include interior partially cylindrical concave wall sections configured to receive one of the cylindrical sleeves.
24. (New) The apparatus of claim 23, wherein each of the mounting tubes also includes a corner notch located between concave wall sections.

REMARKS

Reconsideration and reversal of the rejections expressed in the Office Action dated November 5, 2002 is respectfully requested in light of the following.

Claims 1-24 are solicited, wherein claims 1, 7, 11, 12, 16, and 21 are presented in independent form. Claims 1, 11, and 16 have been amended to better define and further distinguish the present invention over the prior art. New claims 21-24 have been added and recite subject matter similar to claims 2, 4, 5, and 6, respectfully.

In the aforementioned Office Action, the Examiner rejected claims 1-6, 8-11, and 13-15 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. More particularly, the Examiner objected to the terminology "external sidewall" in claim 1 and requested clarification as to the definition of "external". As such, claim 1 has been amended to clearly recite that the external sidewalls are "external" to an opening. The Examiner also objected to claim 11 and the recitation of "external surface" in line 8. Again, the Examiner requested clarification as to the definition of "external surface". Claim 11 has been amended to replace the term "external surface" with --outer surface--. Further, claim 11 has been amended to recite that the base frame of the bed includes the outer surface. In view of the foregoing amendments, it is respectfully submitted that all of the solicited claims comply with the requirements of 35 U.S.C. § 112.

Claims 1, 3, 5, 6, and 9 stand rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,738,539 to Schultz (hereinafter "Schultz '539").

Schultz '539 relates to a Caster Bracket. More particularly, Schultz '539 discloses a bracket 28 for mounting a caster to a dolly 10 that includes four sides 12, 14, 16, and 18. A top member 20 extends between and is connected to opposite sides 12, 14, 16, and 18 of the dolly 10 for adding rigidity to the structure and to support an article of furniture, such as a television set 21. Each of the corners of the dolly 10 is reinforced by a block-like member 22 that is rigidly secured to adjacent sides 12, 14, 16, and 18. The caster includes a wheel 30 rotatably mounted on a bifurcated member 32 by a pin 34. A stem 36 is secured to and

extends from the bifurcated member 32 for insertion into a suitable socket on the bracket 28. Bracket 28 includes a mounting end portion that includes sections 52 and 54 which extend respectively from arm portions 48 and 50. The sections 52 and 54 are secured as by spot welds 55 to opposite sides 60 and 62 of a V-shaped metal insert. The sides 60 and 62 of the metal insert terminate in intumed flanges 64 and 66. These flanges 64 and 66 are adapted to slide into the recesses 24 and 26 in the block-like member 22 for engagement with surfaces 68 and 70, whereby opposed surfaces on the bracket provided by the sides 60 and 62 and the flanges 64 and 66 cooperate with opposed surfaces on the block-like member 22 for securely connecting the bracket to the member 22, and hence the dolly 10 (Fig. 4). The welds 55 are used to couple the bracket 28 to the metal insert, not to the sides 12, 14, 16, 18 or the member 22.

Amended claim 1 recites a patient support apparatus comprising a base frame, a patient support coupled to the frame, and a plurality of casters each having a sleeve. Claim 1 now also recites a plurality of caster mounting tubes, each mounting tube including a plurality of external sidewalls surrounding an opening, each of the external sidewalls having an interior surface facing inwardly toward the opening and an exterior surface facing outwardly away from the opening. Claim 1 further recites the interior surface as being configured to receive in abutting relationship the sleeve of a caster, the plurality of external sidewalls including a generally planar first external sidewall, the exterior surface of the first external sidewall abutting the base frame, and the mounting tube being connected to the base frame by welds located adjacent the first external sidewall.

Applicants appreciate the Examiner's request for clarification regarding the definition of the "external sidewall" in claim 1. The positioning of the external sidewalls have now been clearly defined as surrounding an opening, wherein an interior surface faces inwardly toward the opening and an exterior surface faces outwardly away from the opening.

It is respectfully submitted that the Schultz '539 patent does not contain the limitations of amended claim 1. More particularly, the sections 52 and 54 of the bracket 28 in Schultz '539 clearly do not surround an opening, much less have an interior surface facing inwardly toward the opening and an exterior surface facing outwardly away from the opening, wherein the interior surface is configured to receive in abutting relationship the sleeve of the caster. In Schultz '539, the socket 42 for receiving the stem 36 supporting the wheel 30 is clearly positioned in spaced relation to the sections 52 and 54 of the bracket 28. In summary, the Schultz '539 patent simply does not disclose a mounting tube including the plurality of external sidewalls surrounding an opening, each of the external sidewalls having an interior surface facing inwardly toward the opening and an exterior surface facing outwardly away from the opening, wherein the interior surface is configured to receive in abutting relationship the sleeve of a caster, and the exterior surface of one of the external sidewalls abutting the base frame of a patient support.

As detailed above, claim 1 also recites a "mounting tube being connected to the base frame by welds located adjacent the first external side wall." This element is clearly missing from Schultz '539. More particularly, the welds 55 in Schultz '539 are used to couple the bracket 28 to the metal insert, not to the sides 12, 14, 16, 18 or even the block-like member 22.

For the foregoing reasons, it is respectfully submitted that claim 1, and the claims dependent therefrom, are properly allowable over Schultz '539.

Applicants maintain the position that the Schultz '539 patent simply does not support the Examiner's rejection of the claims 1, 3, 5, 6, and 9 under 35 U.S.C. § 102(b). The case law is clear on this point, "anticipation requires that a single prior art reference disclose every limitation in a patent claim." General Electric Co. v. Nintendo Co., 50 USPQ2d 1910, 1915 (Fed. Cir. 1999) (citing PPG Industries, Inc. v. Guardian Industries Corp., 37 USPQ 2d 1618,

challenged claims and enable one skilled in the art to make the anticipating subject matter.”) Further, the Federal Circuit has held that the test for anticipation is whether the claim reads on the product or process disclosed in the prior art, not on what the reference broadly “teaches”. SSIH Equip., S.A. v. United States Int’l Trade Comm’n, 718 F.2d 365, 218 USPQ 678 (Fed. Cir. 1983). More particularly, the Federal Circuit has held that the test for anticipation is “[t]hat which would literally infringe if later in time anticipates if earlier than the date of invention.” Lewmar Marine, Inc. v. Barient, Inc., 827 F.2d 744, 3 USPQ 2d 1776 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988).

In the present case, element 20 of the Schultz ‘539 patent discloses a top member to support an article of furniture, such as a television set 21, shown in dotted lines in Fig. 1 (Col. 2, lines 5-12). The top member 20 is not a patient support as understood by one of ordinary skill in the art. Under the test developed by the Federal Circuit, the dolly 10 of the Schultz ‘539 patent would not literally infringe on amended claim 1. As such, it is respectfully submitted that the Schultz ‘539 patent does not anticipate this claim. For this reason alone, the rejection of claim 1 under 35 U.S.C. § 102 as being anticipated by Schultz ‘539 is improper.

Claims 1, 2, and 8 have been rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Patent No. 5,330,064 to Hall (hereinafter “Hall”). Hall relates to a Support System for a Holding Rack. More particularly, Hall discloses a holding rack 20 including a frame 24 having a first frame member 28 and a second frame member 32 joined to first frame member 28 at a corner 36. An upright 40 is located adjacent corner 36. An exterior support member 44 is disposed between upright 40 and outer perimeter of frame 24. A conventional caster 50 is positioned below and is rotatably secured relative to upright 40 and relative to exterior support member 44 by means of an extension 54.

Again, it is respectfully submitted that the Hall patent does not disclose a patient support as required by amended claim 1. The Hall patent discloses a holding rack 20 configured to hold conventional trays  $T_1$  and  $T_2$  (Fig. 4). Applicants respectfully submit that the structure of the holding rack in Hall is not configured for use as patient support. As such, for this reason alone, it is respectfully submitted that the rejection of claim 1 under 35 U.S.C. § 102 as being anticipated by Hall is improper.

Further, amended claim 1 requires a plurality of caster mounting tubes, each mounting tube including a plurality of external sidewalls surrounding an opening, each of the external sidewalls having an interior surface facing inwardly toward the opening and an exterior surface facing outwardly away from the opening. Claim 1 now further recites that the interior surface is configured to receive in abutting relationship the sleeve of a caster, and the plurality of external sidewalls including a generally planar first external sidewall, the exterior surface of the first external sidewall abutting the base frame. Claim 1 further recites that the mounting tube is connected to the base frame by welds located adjacent the first external sidewall.

It is respectfully submitted that Hall fails to provide any hint or suggestion of providing a mounting tube including a plurality of external sidewalls surrounding an opening, each of the external sidewalls having an interior surface facing inwardly toward the opening and an exterior surface facing outwardly away from the opening, wherein the interior surface is configured to receive in abutting relationship the sleeve of a caster. Referring to Fig. 2 of Hall, the extension 54 is not in in abutting relationship with the exterior support member 44, but is spaced therefrom by the upright 40. As explained in Hall, it is important that the uprights 40 be fully received within exterior support members positioned outside a rectangular frame 100 for increasing the space available for the insertion of a tray  $T_2$  as illustrated in Fig. 4. As such, there would be no motivation for one of ordinary skilled in the

art to remove the upright 40 so that the extension 54 would be in an abutting relationship with the exterior support member 44. In summary, it is respectfully submitted that the Hall reference fails to provide any disclosure, much less any hint or suggestion of, the elements now clearly recited in amended claim 1.

Claims 11, 13, 14, and 15 have been rejected by the Examiner under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 4,788,741 to Hilborn (hereinafter "Hilborn") in view of U.S. Patent No. 3,452,386 to Carlson (hereinafter "Carlson"). Hilborn relates to a Keyed Mounting Assembly for Lockable Swivel Caster. More particularly, Hilborn discloses a caster 10 and a socket 12 to be mounted on the bottom of a hollow leg 14 of a furniture piece. Caster 10 has a wheel 16 which rotates about a horizontal axis and a generally cylindrical stem 18 which extends along a generally vertical axis 20 which extends centrally through the socket 12 and the leg 14. Socket 12 has a body 24 and an outer surface 26 which is made to fit tightly in an opening 28 in the square tubular leg 14.

Carlson relates to a Caster Socket Assembly. More particularly, Carlson discloses a ball bearing caster 11 mounted in a caster socket 12. The caster socket 12 is secured to an open end of a leg of a chair base by welding 13.

Amended claim 11 recites a method for attaching a caster having a cylindrical sleeve to a base frame of a bed, the method comprising the steps of providing a caster having a cylindrical sleeve, a mounting tube having four sidewalls configured to provide an interior opening having a substantially rectangular cross-sectional shape, and a base frame of a bed having an outer surface. Claim 11 now further recites the step of forming within the interior opening through the mounting tube, an opening having a generally round cross-sectional shape to receive the cylindrical sleeve of the caster therein. Claim 11 further recites placing a first sidewall of the mounting tube against the outer surface of the base frame, and welding the mounting tube to the base frame with first and second welds located at opposite ends of

the first sidewall. Finally, claim 11 recites installing the sleeve of the caster into the interior opening of the mounting tube.

Hilborn and Carlson, either alone or in combination, fail to teach or suggest the step of providing a caster having a cylindrical sleeve, a mounting tube having four sidewalls configured to provide an interior opening having a substantially rectangular cross-sectional shape, and a base frame of a bed having an outer surface, together with the step of forming within the interior opening through the mounting tube an opening having a generally round cross-sectional shape to receive the cylindrical sleeve of the caster therein. Hilborn simply fails to teach or suggest the initial step of providing a mounting tube with an interior opening having a substantially rectangular cross-sectional shape followed by the subsequent step of forming within the interior opening through the mounting tube a further opening having a generally round cross-sectional shape configured to receive the cylindrical sleeve of a caster therein. As acknowledged by the Examiner, "Carlson is relied upon to merely show that it is known in the art to provide welds 13."

Further, there is no teaching or suggestion in Hilborn or Carlson of the step of placing a first sidewall with a mounting tube against the outer surface of the base frame of a bed in combination with welding the mounting tube to the base frame with first and second welds located at opposite ends of the first sidewall. The caster 10 and the socket 12 in Hilborn are mounted on the bottom of a hollow leg of a furniture piece. Absent some objective teaching in the prior art suggesting the step of placing the first sidewall of the mounting tube against the outer surface of the base frame in combination with welding the mounting tube to the base frame, it is respectfully submitted that the Examiner has failed to satisfy his burden of establishing obviousness.

The Patent and Trademark Office can satisfy its burden of establishing obviousness "only by showing some *objective* teaching in the prior art or that knowledge generally



available to one of ordinary skill in the art would lead an individual to combine the relevant teachings of the references." In re Fine, 1837 F.2d 1071, 1073, 5 USPQ2d 1596 (Fed. Cir. 1988) (emphasis added) (citations omitted). The Federal Circuit in In re Fine stated that a "bald assertion" that substituting an element in a prior art reference would have been within the ordinary skill in the art is insufficient to support a finding of obviousness. Id. at 1074.

The Examiner has failed to satisfy the Patent and Trademark Office burden of establishing obviousness. More particularly, the Examiner fails to show any objective teaching that would suggest modifying Hilborn in the manner suggested. The prior art simply does not teach or suggest all of the claim limitations recited in claim 1.

It is clear that "deficiencies of the cited reference cannot be remedied by ... general conclusions about what is 'basic knowledge' or 'common sense'." In re Zurko, 258 F.3d 1379, 1385, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001). As stated recently by the Federal Circuit, "[t]his factual question of motivation is material to patentability, and could not be resolved on subjective beliefs and unknown authority." In re Lee, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002) (quoting W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312 (Fed. Cir. 1983)). More particularly, in In re Lee, the court found the Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used on many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" did not adequately address the issue of motivation to combine. Id.

Similarly, in the present case the conclusory statement that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided the connection between the mounting tube and the base frame utilizing welds as disclosed by Carlson" fails to satisfy the burden of establishing obviousness. As such, it is

respectfully submitted that claim 11, and the claims dependent therefrom, are in condition for allowance .

Claims 16-20 stand rejected by the Examiner under 35 U.S.C. § 103 as being unpatentable over Hilborn in view of Carlson.

Applicants assume that the Examiner erroneously indicated that claims 16, 19, and 20 are rejected over Hilborn in view of Carlson given that the prior Office Action rejected these same claims over Hall in view of Carlson. Further, it appears that the structure attributed to Hilborn on page 5, lines 8-13 of the Office Action, is in fact properly attributed to Hall. As such, the Applicants are treating this as a rejection based on Hall in view of Carlson.

Applicants respectfully request clarification should this assumption be incorrect.

Amended claim 16 requires the step of providing a caster having a sleeve including a rectangular portion having a substantially rectangular cross-sectional shape, and a lumen having a substantially rectangular shape, and a spindle having a rectangular portion which has a substantially rectangular cross-sectional shape and a round portion which has a substantially round cross-sectional shape. Claim 16 now further recites the step of installing the rectangular portion of the spindle into the lumen of the sleeve such that the round portion of the spindle extends outside of the rectangular portion of the sleeve.

Hall discloses an extension 54 having only a single rectangular cross-sectional shape. As acknowledged by the Examiner, Carlson is "relied upon merely to show that it is known in the art to provide welds 13." Neither of these references provide any teaching or suggestion to providing a spindle having a portion which has a substantially rectangular cross-sectional shape received in the lumen and a portion which has substantially round cross-sectional shape. For this reason alone, it is respectfully submitted that claim 16, and the claims dependent therefrom, are in condition for allowance.

In the most recent Office Action, the Examiner has apparently disregarded any structural limitation recited in claim 16. More particularly, the Examiner has cited to Ex parte Pfeiffer, 135 USPQ 31, 1962 C.D. 408 (BPAI 1961), for holding that "to be entitled to weight in method claims, the recited structural limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a use of a particular structure."

The Board in Ex parte Pfeiffer found nothing inherently wrong with the recitation of structure in method claims. "The patent statute, 35 U.S.C. 100(b) impliedly permits recitations of structure in method claims. Manifestly, the mere inclusion of structure in a method claim does not itself render the claim unstatutory or fatally defective." Id. (citing Ex parte Kangas, 125 USPQ 419, 421).

Ex parte Pfeiffer related to a claimed method of transferring fluid material from an airplane to the ground by freely dropping a bag containing such material from the airplane without the necessity of a parachute. The applicant argued that the prior art did not disclose rubber bags having walls of extremely high tensile strength capable of stretching several hundred percent and of oblate shape which provides for high air resistance and a relatively low terminal velocity. In summary, the Board in Ex parte Pfeiffer held:

[T]he distinctions urged by the appellant as lending patentability to the claims over the references, are not attributes of manipulative steps but for the prescribed unchangeable law of operation of the container structure. The container is dropped like the reference containers and, like the latter, from then on nothing is or can be done by man, or under his control, to change its inherent operation. As we have indicated, such uncontrolled operation can not support patentability.

As such, the holding in Ex parte Pfeiffer is properly limited to claims reciting unchangeable laws of operation of the recited structure and not expanded to cover attributes of manipulative steps.

In the present case, amended claim 16 clearly recites structural limitations that affect the method in a manipulative sense as opposed to merely reciting an intended operation or

use of the structure. More particularly, claim 16 recites steps of attaching a caster to a base frame of a bed, including the steps of providing a caster having a sleeve including a rectangular portion having a rectangular cross-sectional shape, a lumen having a substantially rectangular cross-sectional shape, and a spindle having a rectangular portion which has a substantially rectangular cross-sectional shape and a round portion which has a substantially round cross-sectional shape, and installing the rectangular portion of the spindle into the lumen of the sleeve such that the round portion of the spindle extends outside of the rectangular portion of the sleeve.

Given the failure of the prior art to teach or suggest the method of claim 16, including the structural limitations that affect the method in a manipulative sense, it is respectfully submitted that claim 16, and the claims dependent therefrom, are in condition for allowance.

Applicants gratefully acknowledge the Examiner's allowance of claims 7 and 12. Applicants further note with appreciation the Examiner's indication that claim 4 contains allowable subject matter.

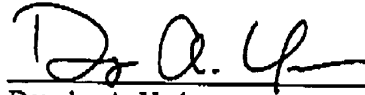
New claims 21-24 have been added wherein claim 21 is presented in independent form, and claims 22-24 depend from claim 21. New claim 21 contains subject matter from properly allowable claim 4. As such, it is respectfully submitted that claims 21-24 are in condition for allowance.

The foregoing amendments are believed to place the application in clear condition for allowance, and at least place the claims in better condition for consideration on appeal. As such, entry of the amendments is respectfully requested under 37 C.F.R. § 1.116.

In view of the foregoing, it is respectfully submitted that all of the solicited claims are in condition for allowance. Such action is respectfully requested.

Examiner is invited to contact the undersigned at the telephone number provided below should any questions or comments arise during reconsideration of this matter.

Respectfully submitted,



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**APPENDIX**  
**MARKED-UP VERSION SHOWING CHANGES**

**IN THE SPECIFICATION**

--This application is a [divisional] continuation of U.S. Patent Application Serial No. 09/263,039, filed March 5, 1999, now U.S. Patent No. 6,321,878, the disclosure of which is incorporated herein by reference.--

**IN THE CLAIMS**

Please amend claims 1 and 11 as follows:

1. (Twice Amended) A patient support apparatus comprising:
  - a base frame,
  - a patient support coupled to the base frame,
  - a plurality of casters each having a sleeve, and
  - a plurality of caster mounting tubes, each mounting tube including a plurality of external side walls surrounding an opening, each of the external side walls having an interior surface facing inwardly toward the opening and an exterior surface facing outwardly away from the opening, the interior surface being configured to receive in abutting relationship the sleeve of a caster, the plurality of external side walls including a generally planar first external side wall, the exterior surface of the first external side wall abutting the base frame, the mounting tube being connected to the base frame by welds located adjacent the first external side wall.
  
11. (Twice Amended) A method for attaching a caster having a cylindrical sleeve to a base frame of a bed, the method comprising the steps of:

providing a caster having a cylindrical sleeve, a mounting tube having four side walls configured to provide an interior opening having a substantially rectangular cross-sectional shape, and a base frame of a bed having an outer surface;

forming [an] within the interior opening through the mounting tube an opening having a generally round cross-sectional shape to receive the cylindrical sleeve of the caster therein;

placing a first side wall of the mounting tube against [an external] the outer surface of the base frame;

welding the mounting tube to the base frame with first and second welds located at opposite ends of the first side wall; and

installing the sleeve of the caster into the interior opening of the mounting tube.

16. (Twice Amended) A method for attaching a caster to a base frame of a bed, the method comprising the steps of:

providing a mounting tube having four side walls configured to provide a substantially rectangular cross-sectional shape;

providing a base frame of a bed;

providing a caster having a sleeve including a rectangular portion having a substantially rectangular cross-sectional shape, a lumen having a substantially rectangular cross-sectional shape, and a spindle having a rectangular portion which has a substantially rectangular cross-sectional shape [received in the lumen] and a round portion which has a substantially round cross-sectional shape;

placing a first side wall of the mounting tube against the base frame;

welding the mounting tube to the base frame with first and second welds located at opposite ends of the first side wall;

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installing the rectangular portion of the spindle into the lumen of the sleeve  
such that the round portion of the spindle extends outside of the rectangular portion of the  
sleeve; and

installing the sleeve of the caster into the interior opening of the mounting  
tube.